

**REMARKS**

**I. Formalities**

Applicant thanks the Examiner for considering the references listed on the PTO/SB/08 Forms submitted with the Information Disclosure Statements filed on February 10, 2004 and February 7, 2008. Also, Applicant thanks the Examiner for acknowledging Applicant's claim of foreign priority under 35 U.S.C. § 119 and receipt of the certified copy of the priority document. Further, Applicant thanks the Examiner for accepting the drawings filed on February 10, 2004.

**II. Status of the Application**

By the present Amendment, Applicant is amending claims 6, 8, 18, 20, 29, 31, 38, and 40 to clarify the claimed invention. No new matter is added. Further, Applicant is canceling claims 2, 4, 9, 12, 16, 23, 25, 27, 32, 34, 36, and 41 without prejudice or disclaimer.

Therefore, claims 1, 3, 5-8, 10, 11, 13-15, 17-22, 24, 26, 28-31, 33, 35, and 37-40 are all the claims pending in the application. Claims 1, 3, 5, 7, 15, 17, 19, 21, 24, 26, 28, 30, 33, 35, 37, and 39 have been withdrawn. Claims 6, 8, 10, 11, 13, 14, 18, 20, 22, 29, 31, 38, and 40 are under consideration and have been rejected. The present Amendment addresses each point of rejection raised by the Examiner. Favorable reconsideration is respectfully requested.

**III. Claim Rejections Under 35 U.S.C. § 102(e) - Scarth**

Claims 4, 23, 27, 32, 36, and 41 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,996,323 to Scarth et al. (hereinafter "Scarth"). Applicant is canceling these claims without prejudice or disclaimer.

**IV. Claim Rejections Under 35 U.S.C. § 103(a) - Scarth in view of Bierman**

Claims 2, 9, 12, 25, and 34 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Scarth in view of U.S. Publication No. 2004/0109661 to Bierman et al. (hereinafter “Bierman”). Applicant is canceling these claims without prejudice or disclaimer.

**V. Claim Rejections Under 35 U.S.C. § 103(a) - Scarth in view of Shimomura**

Claim 16 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Scarth in view of U.S. Publication No. 2002/0126372 to Shimomura et al. (hereinafter “Shimomura”). Applicant is canceling this claim without prejudice or disclaimer.

**VI. Claim Rejections Under 35 U.S.C. § 103(a) - Scarth in view of Shimokawa**

Claims 6, 29, and 38 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Scarth in view of U.S. Patent No. 6,445,471 to Shimokawa et al. (hereinafter “Shimokawa”). Applicant respectfully disagrees with the Examiner’s rejection and traverses this ground of rejection as follows.

In rejecting claim 6, the Examiner acknowledges that Scarth fails to teach or suggest “a spectrum analyzer for analyzing the spectrum of the multiplexed optical signal before being demultiplexed by the demultiplexer and a wavelength-specific signal level detector for detecting the power levels of the optical signals of the respective channels based on the analysis result obtained by the spectrum analyzer” (Office Action, page 13). However, the Examiner asserts that Shimokawa discloses these features, and that it would have been obvious to a person of ordinary skill in the art to combine the disclosures of Scarth and Shimokawa. According to the Examiner, the reason for combining the teachings of the references would have been to allow the system to analyze the incoming power level of the optical signals before the incoming optical power signal is passed through the attenuation control stages. Applicant respectfully disagrees.

Claim 6 requires the multiplexed optical signal to travel in order through the demultiplexer, the attenuator, and the multiplexer. Additionally, claim 6 recites that the optical signal is provided to a spectrum analyzer **before** it is demultiplexed by the demultiplexer. In contrast, Figure 3 of Shimokawa shows that the optical signal is sent to an optical spectrum analyzer (1209) **after** traveling through an attenuator (1203) and a multiplexer (1206) (col. 2, lines 17-20). Although Figure 4 of Shimokawa shows that the optical signal may be sent to an optical spectrum analyzer (1309) before being demultiplexed by a demultiplexer (1302), the demultiplexer (1302) shown in Figure 4 is not located before the attenuator (1203). Instead, this demultiplexer (1302) is located **after** the attenuator (1203). Thus, Shimokawa does not teach providing an optical signal to a spectrum analyzer before the optical signal is demultiplexed by the demultiplexer, and transmitted through an attenuator and a multiplexer.

Furthermore, Applicant submits that it would not have been obvious to a person of ordinary skill in the art to combine Scarth and Shimokawa to teach or suggest “a spectrum analyzer for analyzing the spectrum of the multiplexed optical signal before being demultiplexed by the demultiplexer,” as recited in claim 6. Shimokawa discloses that the optical spectrum analyzer (1209) is used to monitor the peak power and wavelength of the **transmitted** optical signal (col. 2, lines 20-22). Shimokawa is particularly concerned with making transmission characteristics uniform for transmitting all optical signals with the same transmission characteristics (col. 1, lines 11-13). Accordingly, Shimokawa specifically places the optical spectrum analyzer (1209) after the attenuator (1203) and the multiplexer (1206), and immediately before the optical signal is to be transmitted. Therefore, a person of ordinary skill in the art would not have been motivated to place the optical spectrum analyzer of Shimokawa

before the demultiplexer of Scarth, because the optical signal is not ready for transmission at this position within the system of Scarth.

Accordingly, Applicant submits that claim 6 distinguishes over Scarth in view of Shimokawa at least by virtue of the aforementioned differences, as well as its additionally recited features. Claims 29 and 38 recite features similar to those discussed above with regard to claim 6. Therefore, Applicant submits that claims 29 and 38 distinguish over Scarth in view of Shimokawa for similar reasons, as well as their additionally recited features.

**VII. Claim Rejections Under 35 U.S.C. § 103(a) - Scarth in view of Shimokawa and Bierman**

Claims 10 and 13 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Scarth in view of Shimokawa as applied to claim 6, and further in view of Bierman. Applicant respectfully disagrees with the Examiner's rejection and traverses this ground of rejection as follows.

As discussed above, Scarth and Shimokawa fail to teach or suggest "a spectrum analyzer for analyzing the spectrum of the multiplexed optical signal before being demultiplexed by the demultiplexer." Further, Bierman fails to remedy this deficiency in Scarth and Shimokawa. Therefore, claims 10 and 13 are patentable over Scarth, Shimokawa, and Bierman at least by virtue of their dependency on claim 6, as well as their additionally recited features.

**VIII. Claim Rejections Under 35 U.S.C. § 103(a) - Scarth in view of Shimokawa and Shimomura**

Claim 18 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Scarth in view of Shimokawa as applied to claim 6, and further in view of Shimomura.

Applicant respectfully disagrees with the Examiner's rejection and traverses this ground of rejection as follows.

As discussed above, Scarth and Shimokawa fail to teach or suggest "a spectrum analyzer for analyzing the spectrum of the multiplexed optical signal before being demultiplexed by the demultiplexer." Further, Shimomura fails to remedy this deficiency in Scarth and Shimokawa. Therefore, claim 18 is patentable over Scarth, Shimokawa, and Shimomura at least by virtue of its dependency on claim 6, as well as its additionally recited features.

**IX. Claim Rejections Under 35 U.S.C. § 103(a) - Scarth in view of Kawasaki and Bierman**

Claims 8, 11, 14, 22, 31, and 40 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Scarth in view of U.S. Patent No. 6,288,836 to Kawasaki et al. (hereinafter "Kawasaki") and Bierman. Applicant respectfully disagrees with the Examiner's rejection and traverses this ground of rejection as follows.

In rejecting claim 8, the Examiner acknowledges that Scarth fails to teach or suggest "a supervisory signal receiver for receiving a supervisory signal indicating whether there is transmission of at least part of the optical signals of the respective channels which form the multiplexed optical signal input to the demultiplexer." However, the Examiner maintains that Kawasaki discloses the claimed supervisory signal receiver. The Examiner also acknowledges that Scarth fails to teach or suggest "a signal level adjusting section controller which controls the respective signal level adjusting sections so as to attenuate the power level of the optical signal of a channel to the greatest extent possible when the supervisory signal receiver has determined that no optical signal was transmitted to the channel." However, the Examiner asserts that Bierman discloses the claimed signal level adjusting section, and that it would have been obvious

to a person of ordinary skill in the art to combine the teachings of Scarth, Kawasaki, and Bierman. Applicant respectfully disagrees.

Fig. 13 of Kawasaki shows an embodiment of an optical amplifier (col. 8, lines 28-30). As shown in Fig. 13, a supervising circuit 56 detects the number of channels of the WDM signal light, and supplies a detected value of the number of channels to a control circuit 54' for the variable optical attenuator 28 (col. 8, lines 49-53). However, the supervising circuit 56 merely determines how many channels are present, and does not determine whether an optical signal was transmitted to a particular channel, as recited in claim 8. Further, Bierman fails to remedy the deficient teachings of Scarth and Kawasaki. Therefore, Applicant submits that claim 8 is patentable over Scarth, Kawasaki, and Bierman at least by virtue of the aforementioned differences, as well as its additionally recited features. Because independent claims 31 and 40 recite features similar to those discussed above with regard to claim 8, Applicant submits that claims 31 and 40 are patentable over Scarth, Kawasaki, and Bierman for similar reasons. Further, claims 11, 14, and 22 are patentable over Scarth, Kawasaki, and Bierman at least by virtue of their dependencies on claim 8, as well as their additionally recited features.

**X. Claim Rejections Under 35 U.S.C. § 103(a) - Scarth in view of Kawasaki, Bierman, and Shimomura**

Claim 20 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Scarth in view of Kawasaki and Bierman as applied to claim 8, and further in view of Shimomura. Applicant respectfully disagrees with the Examiner's rejection and traverses this ground of rejection as follows.

As discussed above, Scarth, Kawasaki, and Bierman fail to teach or suggest the supervisory signal receiver recited in claim 8. Further, Shimomura fails to remedy the

deficiencies of Scarth, Kawasaki, and Bierman. Therefore, claim 20 is patentable over Scarth, Kawasaki, Bierman, and Shimomura at least by virtue of the reasons discussed above, as well as its additionally recited features.

**XI. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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**23373**

CUSTOMER NUMBER

Date: October 3, 2008